

MUSICAL FIDELITY

X-DAC^{V8}

X-^{V8} SERIES TUBED DIGITAL TO ANALOGUE CONVERTER



INSTRUCTIONS FOR USE

Thank you for purchasing the Musical Fidelity X-DAC^{V8}

This model uses the top quality, ultra low jitter 24 Bit DAC technology and further jitter reduction techniques to achieve both an excellent technical specification and unparalleled digital sound quality. This is complemented by a choice between the classic X-10D tube stage or solid state outputs for the ultimate listening experience. It has three standard RCA digital inputs and a USB socket for playback from computer. The X-DAC^{V8} is a perfect answer to digital listening requirements in a small, beautifully engineered package.

Used properly and carefully, it should give many years of outstanding musical reproduction.

Dust regularly with a soft duster or soft brush, but be careful when using cleaning or polishing agents - they may harm the surface finish.

*If you have any questions about your audio system,
Please consult your dealer who is there to help and advise.*

Musical Fidelity

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IMPORTANT! *(U.K. only)*

This unit is supplied in the U.K. with mains lead fitted with a moulded 13 amp plug. If, for any reason, you need to cut off the plug, please remove the fuse holder and dispose of the plug safely, out of reach of children. **It must not be plugged into a mains outlet.**

The wires in the mains lead supplied with this appliance are coloured in accordance with the following code:

Green and yellow.....Earth
Blue.....Neutral
Brown.....Live

WARNING - This appliance MUST be earthed

As the colours of the wires of the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E or coloured green or green-and-yellow, or by the earth symbol : 

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

If connecting to a BS1363 plug, a 13 amp fuse must be used.

WARNING:

**ANY MODIFICATIONS TO THIS PRODUCT NOT EXPRESSLY APPROVED
BY MUSICAL FIDELITY WHO IS THE PARTY RESPONSIBLE FOR
STANDARDS COMPLIANCE COULD VOID THE USER'S AUTHORITY TO
OPERATE THIS EQUIPMENT.**

INSTALLATION PRECAUTIONS and USER INFORMATION

Your new X-DAC^{V8} is designed and built to provide trouble-free performance, but as with all electronic devices it is necessary to observe a few precautions:

Heed all warnings shown on the back of the product.

Only connect the X-DAC^{V8} to a mains outlet having the same voltage as marked at the back of the unit.

Always ensure that when disconnecting and reconnecting your audio equipment the mains supply is switched off.

Position the mains lead and signal interconnects where they are not likely to be walked on or trapped by items placed on them.

Do not use near water, or place water-filled containers on the X-DAC^{V8}, for example, a flower vase or potted plants. **If water does spill inside, immediately pull out the mains plug from the wall socket and inform your dealer, who should then check the unit before further use. Entry of liquid into the X-DAC^{V8} is dangerous, and may cause electric shock or fire hazard.**

Do not place the unit near direct heat sources such as radiators, direct sunlight or other equipment.

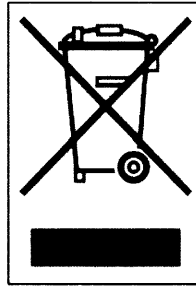
Do not remove any covers or try to gain access to the inside. There are no internal adjustments or fuses you can replace yourself. Refer all service work to an authorised Musical Fidelity agent.

Note: Unauthorised opening of the equipment will invalidate any warranty claim.

Dust regularly with a soft cloth or soft brush but be careful when using cleaning or polishing agents - they may harm the surface finish.

The electronics in modern hi-fi equipment is complex and may, therefore, be adversely affected or damaged by lightning. For protection of your audio system during electrical storms, remove the mains plugs and disconnect any aerial lead.

If after-sales service is required, to help your dealer identify the X-DAC^{V8} please quote the serial number located on the rear panel of the unit.



DISPOSAL

The crossed out wheeled bin label that appears on the back panel of the product indicates that the product must not be disposed of as normal household waste. To prevent possible harm to the environment please separate the product from other waste to ensure that it can be recycled in an environmentally safe manner. Please contact your local government office or your retailer for available collection facilities.



DISPOSITION

La poubelle sur roulettes barrées X, qui apparaît en logo sur le panneau arrière du produit, indique que celui-ci ne doit pas être traité comme un déchet domestique commun. Afin de protéger l'environnement, ce produit électronique devra être géré séparément et donc recyclé selon les nouvelles normes Européennes Rohs concernant les déchets d'appareils électroniques. Prière de contacter les services concernés gouvernementaux ou votre point de vente pour l'élimination et l'enlèvement de déchets électroniques équipés de composants électroniques.



DISPOSAL

La etiqueta cruzada hacia fuera del compartimiento que aparece en el panel trasero del producto indica que el producto no se debe reciclar como basura normal de la casa. Para prevenir daños posible al ambiente separe por favor el producto de otras basura para asegurarse de que puede ser reciclada de una manera ambientalmente segura. Entre en contacto por favor a su oficina gubernamental local o a su minorista para las instalaciones disponibles de la colección.



RIFIUTI

L'etichetta del cassonetto barrato riportato sul retro dell'apparecchio indica che il prodotto non deve essere smaltito tramite la procedura normale di smaltimento dei rifiuti domestici. Per evitare eventuali danni all'ambiente, separare questo prodotto da altri rifiuti domestici in modo che possa venire riciclato in base alle procedure di rispetto ambientale. Per maggiori dettagli sulle aree di raccolta disponibili, contattate l'ufficio govenativo locale od il rivenditore del prodotto.



FACHGERECHTE ENTSORGUNG:

Das auf der Geräterückseite angebrachte Label deutet darauf hin, dass das Produkt nicht mit konventionellem Hauskehricht entsorgt werden darf. Um Schäden und Verschmutzungen an Umwelt und Mensch zu vermeiden, muss das Produkt fachgerecht entsorgt und von anderem Abfall getrennt werden. Wenden Sie sich bei Fragen hierzu an Ihren Fachhändler oder an eine öffentliche Informationsstelle.



AFVAL

Het label op de achterzijde van dit apparaat, een afvalbak op wielen met een kruis doorgehaald, geeft aan dat dit apparaat niet samen met gewoon huishoudafval mag worden weggegooid. Om mogelijke schade aan onze leefomgeving te voorkomen dient dit apparaat, gescheiden van gewoon huishoudelijk afval, te worden afgevoerd zodat het op een milieuvriendelijke manier kan worden gerecycled. Neem voor beschikbare inzamelplaatsen contact op met uw gemeentelijke reinigingsdienst of met uw elektronica leverancier.



HÄVITTÄMINEN

Yliruksattua jäteastiaa kuvaava tarra tuotteen takalevyssä kertoo, että tuotetta ei saa käsitellä normaalina talousjätteenä. Ympäristön suojelemiseksi on tuote pidettävä erillään muusta jätteestä ja se on kierrätettävä ekologisesti kestävällä tavalla. Ota yhteyttä laitteen myyjään tai Pirkanmaan Ympäristökeskukseen lähimmän kierrätyskeskuksen löytämiseksi.



AFSKAFNING

Logoet med en skraldespand med kryds over på bagsiden af apparatet indikerer at dette produkt ikke må kasseres som normal husholdningsaffald. For at forebygge mulig skade på miljøet, bedes De separere dette produkt fra andet affald, og sikre at det bliver genbrugt på en miljørigtig måde. Kontakt venligst de lokale myndigheder eller din forhandler for oplysning om nærmeste tilgængelige opsamlingssted for elektronikaffald.



ΔΙΑΔΙΚΑΣΙΑ ΑΠΟΡΡΙΨΗΣ

ΤΟ ΣΗΜΑ ΜΕ ΤΟΝ ΔΙΑΓΕΓΡΑΜΜΕΝΟ ΤΡΟΧΗΛΑΤΟ ΚΑΘΟ ΑΠΟΡΡΙΜΑΤΩΝ ΣΤΗΝ ΠΙΣΩ ΟΨΗ ΤΟΥ ΜΗΧΑΝΗΜΑΤΟΣ

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ΑΠΟΡΡΙΜΑΤΑ ΩΣΤΕ ΝΑ ΕΞΑΣΦΑΛΙΣΘΕΙ Η ΑΝΑΚΥΚΛΩΣΗ ΤΟΥ ΜΕ ΤΟΝ ΠΡΕΠΟΝΤΑ ΤΡΟΠΟ.

ΠΑΡΑΚΑΛΟΥΜΕ ΝΑ ΕΠΙΚΟΙΝΩΝΗΣΕΤΕ ΜΕ ΤΗΝ ΤΟΠΙΚΗ ΥΠΗΡΕΣΙΑ ΑΝΑΚΥΚΛΩΣΗΣ Η ΜΕ ΤΟ ΚΑΤΑΣΤΗΜΑ ΑΓΟΡΑΣ ΓΙΑ ΠΕΡΙΣΣΟΤΕΡΕΣ ΛΕΠΤΟΜΕΡΕΙΕΣ.

INTRODUCTION

Congratulations on the purchase of your new X-DAC^{V8} digital to analogue converter.

The X-DAC^{V8} is powered directly from mains, and will also happily supply power for the **X-RAY^{V8}** CD player and **X-PLORA^{V8}** tuner components. This turns the X-series components into the equivalent of a miniature DM25 system (with added DAB/FM tuner thrown in).

The X-DAC^{V8} has extremely low jitter, vanishingly low distortion, exemplary linearity and ultra low noise. Its case design complements the X-^{V8} series components which include a CD player, DAB/FM tuner and integrated amplifier all in the same convenient size.

Great attention has been paid to internal layout, isolating each circuit section to prevent possible interaction.

The digital data streams are first up-sampled to 192kHz, which moves noise, jitter and distortion artefacts well above the audio band. They are then passed through a new, low noise, low distortion 24-bit dual-differential digital-to-analogue converter, which allows simpler filtering of the analogue output. This in turn gives an improved audio response without the need for sharp filters that degrade sound quality. The result is a DAC which has a smoother response and lower distortion than previously possible.

There is also the option of selecting the use of a valve stage identical to our classic X-10D as output buffer included.

The resultant performance achieved by this unit is among the best in the world. It has excellent signal to noise ratio, low distortion, wide bandwidth, huge dynamic range, extraordinary resolution and fine detail.

INSTALLATION

Position the X-DAC^{V8} on a stable, horizontal surface where there is no risk of it being knocked, or subjected to vibration such as from loudspeakers.

INPUT CONNECTIONS

The X-DAC^{V8} has user selectable inputs to allow connection for up to four different digital sources.

Inputs 1, 2, 3 and 4 are selectable from the front panel or remote. Use inputs 1, 2 and 3 to connect the digital outputs of any X-^{V8} series or other components for the best experience in digital audio listening.

Input 4 is a USB 1.1 input which allows direct digital audio streaming from a computer's USB output port. See page 7 for setup details.

Please note that the USB input CANNOT be used to stream directly from USB on portable devices such as iPod, or flash drives etc.

DIGITAL OUTPUT CONNECTIONS

There is an output that allows loop through of digital signals.

AUDIO OUTPUT CONNECTIONS

Outputs: Connect your amplifier inputs to the RCA sockets on the back panel marked as **LEFT** and **RIGHT** outputs.

POWER CONNECTIONS

Connect the unit to the mains using supplied lead.

Switching on the power supply unit should light the front panel power LED and the connected components should all come on. The setup is then ready for use.

FOR COMPLETE X-^{V8} SERIES :

For best results with the full complement of X-^{V8} series components, we recommend the following:

X-RAY^{V8} CD player
X-PLORA^{V8} DAB/FM tuner
X-DAC^{V8}
TRIPLE-X170 upgrade power supply

The power connector from the **X-RAY^{V8}** mates with the 5-way socket labelled **X-RAY^{V8}** on the rear of the X-DAC^{V8}. The connector should fit comfortably with a small click when properly seated.

Do not force the connector.

The coaxial (RCA) Digital output from the X-RAY^{V8} may then be connected to a spare digital input on the X-DAC^{V8}, e.g. INPUT 1

The power connector from the **X-PLORA^{V8}** mates with the 4-way socket labelled **X-PLORA^{V8}** on the rear of the X-DAC^{V8}. The connector should fit comfortably with a small click when properly seated.

Do not force the connector.

The coaxial (RCA) Digital output from the X-PLORA^{V8} may then be connected to a spare digital input on the X-DAC^{V8}, e.g. INPUT 2

The XT-100 unit alone should be powered from the upgrade Triple-X170 power supply unit. Connect your XT-100 to this supply through the 6-way XLR socket at the back. The X-PLORA^{V8} and X-RAY^{V8} are supplied from the DAC. This frees up reserve supply for the power amplifiers in the XT100. The L & R audio outputs from the X-DAC^{V8} should be connected, with good quality cable, to a spare input on the X-T100. You can now switch between the two digital inputs using the X-DAC^{V8}. This arrangement also frees up an analogue input on the X-T100 for future use.

CLEANING

Before cleaning the unit, switch off power at the mains switch and remove the mains plug from the wall socket.

Clean the cabinet and remote control unit using a moist cloth. We do not advise using solvents, white spirit or thinners as they could damage the surface finish

UPGRADE PATH

Early in 2007 another interesting new X-^{V8} series product is coming:

The TRIPLE-X170 PSU is an upgrade Power Supply Unit. It increases the power of your X-T100 to 85+85 wpc and improves its peak current. The TRIPLE-X170 PSU will power the X-T100, X-RAY^{V8} and X-PLORA^{V8} simultaneously. Any product connected to it will sound better.

3-component setup, standard power supply

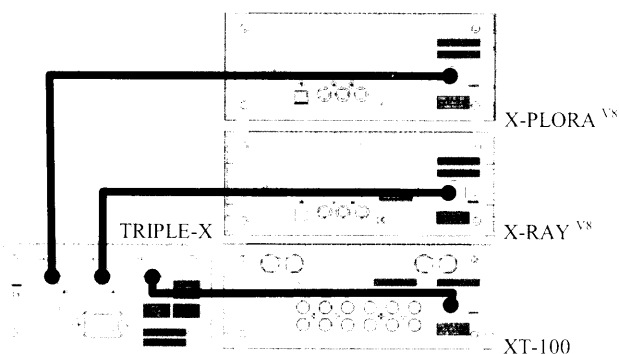


Figure 1

The standard 3-component setup using the original **TRIPLE-X PSU** (bottom left) is shown in figure 1.

The power connector from the **X-PLORA^{V8}** mates with the 4-way socket labelled **X-PLORA^{V8}** on the rear of the **TRIPLE-X PSU**. The connector should fit comfortably with a small click when properly seated.

The power connector from the **X-RAY^{V8}** mates with the 5-way socket labelled **X-RAY^{V8}** on the rear of the **TRIPLE-X PSU**. The connector should fit comfortably with a small click when properly seated.

The power connector from the **XT-100** Integrated amplifier mates with the 6-way socket labelled **XT-100** on the rear of the **TRIPLE-X PSU**. The connector should fit comfortably with a small click when properly seated.

3-component setup, upgraded power supply

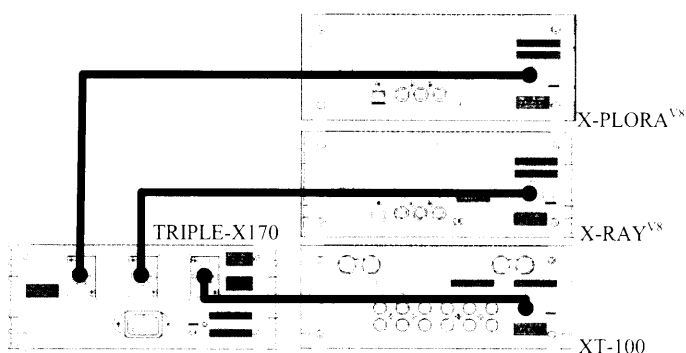


Figure 2

The upgraded 3-component setup using the **TRIPLE-X170 PSU** (bottom left) is shown in figure 2.

The wiring is identical to that given under the standard setup shown above. Simply remove the **TRIPLE-X PSU** and use the **TRIPLE-X170 PSU** in its place.

4-component setup, upgraded power supply

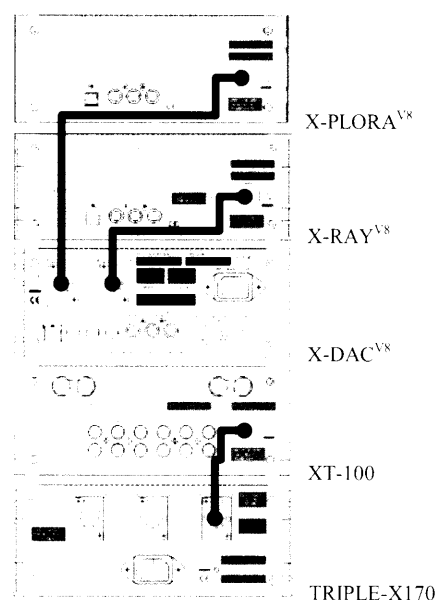


Figure 3

The recommended power supply wiring for the four-component setup, including upgrade power supply and **X-DAC^{V8}**, is shown in figure 3.

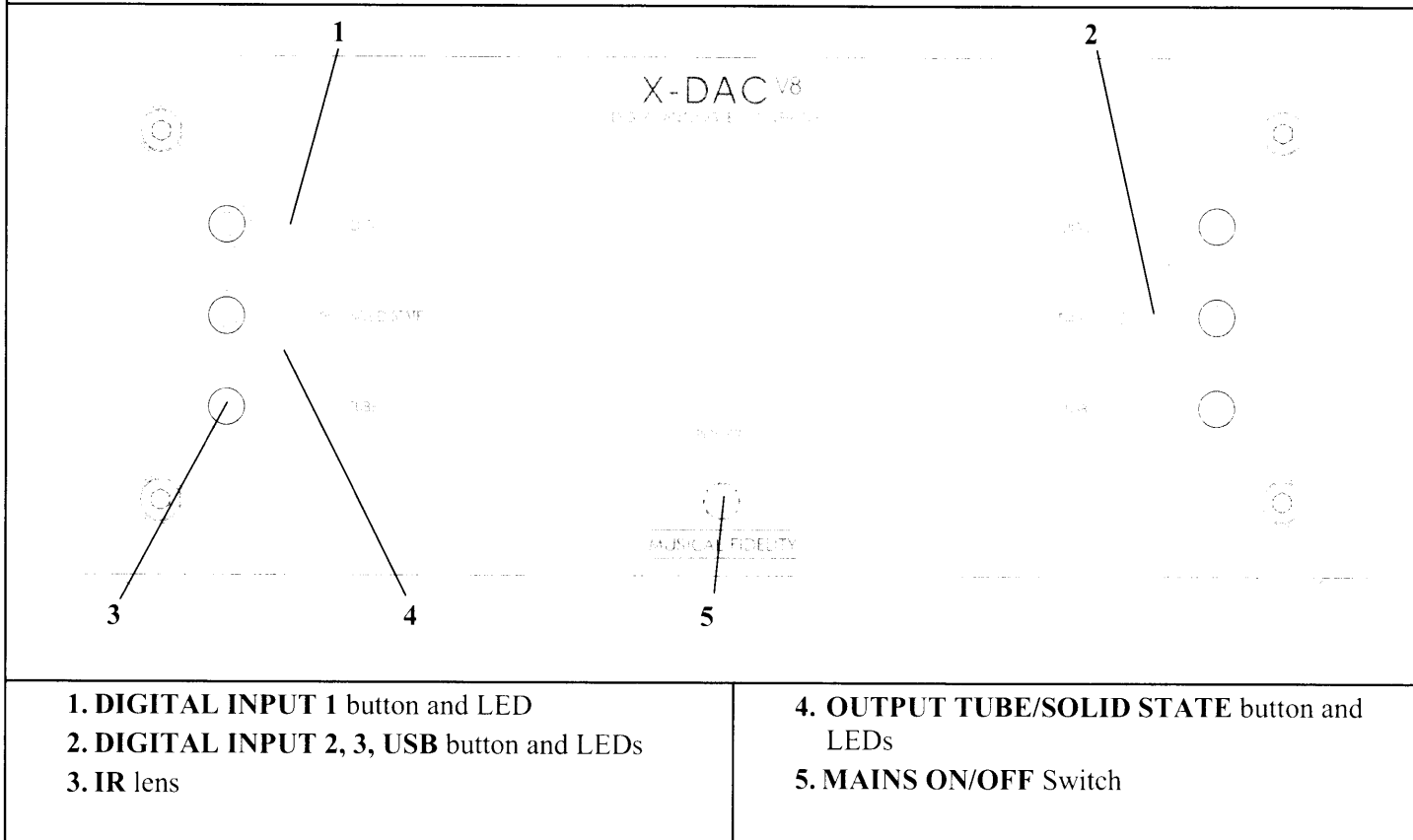
The power connector from the **X-PLORA^{V8}** mates with the 4-way socket labelled **X-PLORA^{V8}** on the rear of the **X-DAC^{V8}**. The connector should fit comfortably with a small click when properly seated.

The power connector from the **X-RAY^{V8}** mates with the 5-way socket labelled **X-RAY^{V8}** on the rear of the **X-DAC^{V8}**. The connector should fit comfortably with a small click when properly seated.

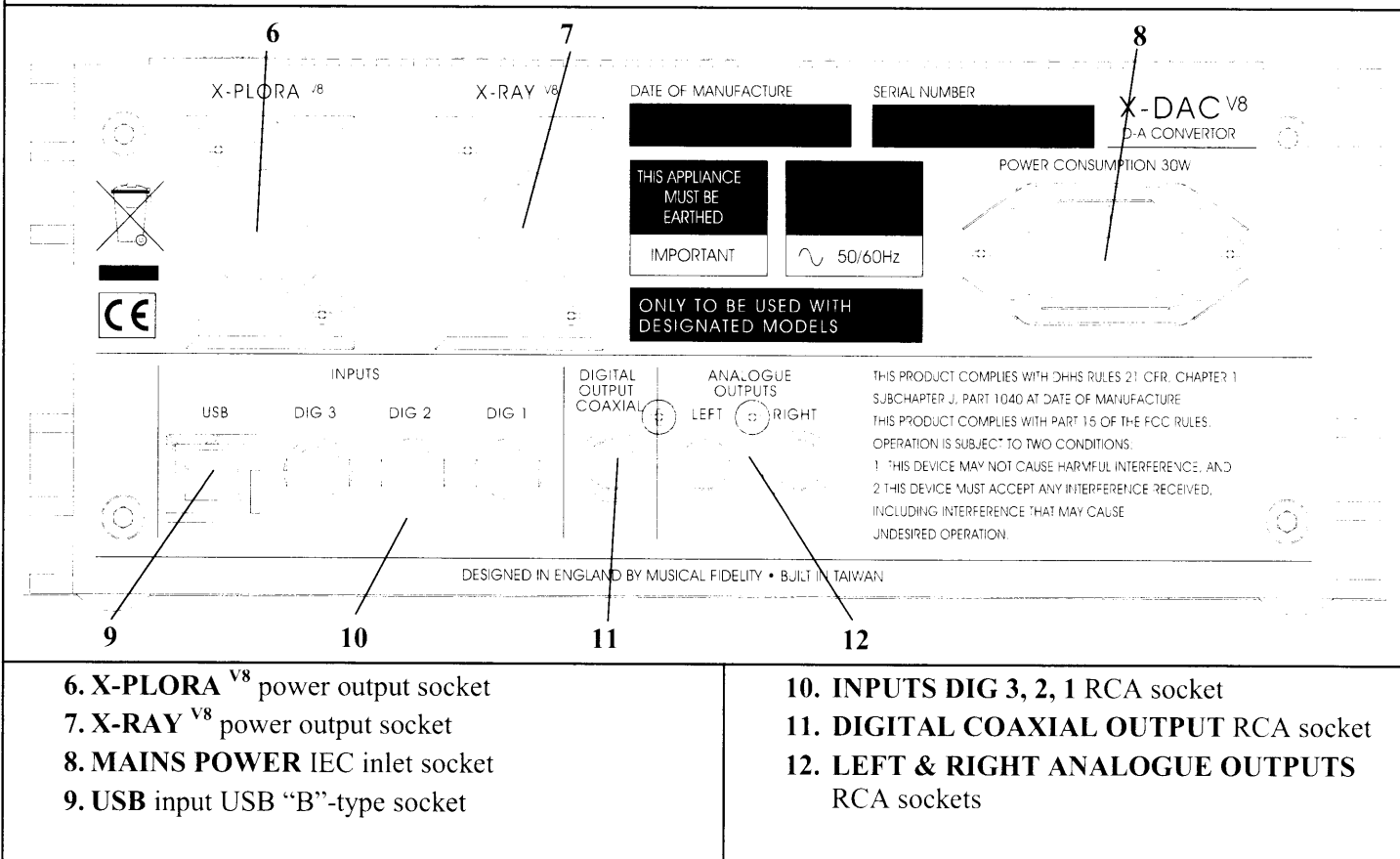
The **XT-100** integrated amplifier should be powered from the upgrade **TRIPLE-X170** power supply unit. Connect your **XT-100** to this supply through the 6-way XLR socket at the back. The **X-PLORA^{V8}** and **X-RAY^{V8}** are now supplied from the **X-DAC^{V8}**. This frees up reserve supply for the power amplifiers in the **XT100**.

This is by no means an exhaustive list, as it is possible to use the original **TRIPLE-X** power supply, say, to supply the CD player alone further isolating it from the DAC and other circuits. The beauty of this system is its incredibly flexible allowing considerable tweaking to obtain optimum audio performance.

FRONT PANEL



REAR PANEL



The remote control shown below enables functions to be operated from a convenient distance. Equivalent buttons on the remote control have the same functions as those on the front panel of the unit. Other functions are only available by remote control. As the handset uses an invisible infra-red light beam, the front edge must be pointed directly towards the receiver window at the front of the player, without visual obstruction between them.

If the range of the remote control greatly decreases, replace the batteries with new ones. Do not mix old and new batteries - two are required, size AAA, LR03 or SUM-4.

Please dispose of used batteries in accordance to local regulations.

Tuner Buttons:

INFO – To access broadcast information

MENU – to choose options

AUTO TUNE – finds previous/next broadcast

MONO/STEREO – Option for weaker FM stations

DAC Buttons:

DIG 1 – Selects DAC digital input 1

DIG 2 – Selects DAC digital input 2

DIG 3 – Selects DAC digital input 3

USB – Selects DAC USB input

Amplifier Buttons:

PHONO – Selects Phono input

AUX 1 – Select Source AUX1 or PDI

AUX 2 – Select source AUX 2

AUX 3 – Select source AUX 3

CD Buttons:

TIME – Displays Track Time/Time remaining

0-9 Buttons – Used to select track numbers

CHECK – Check pre programmed tracks

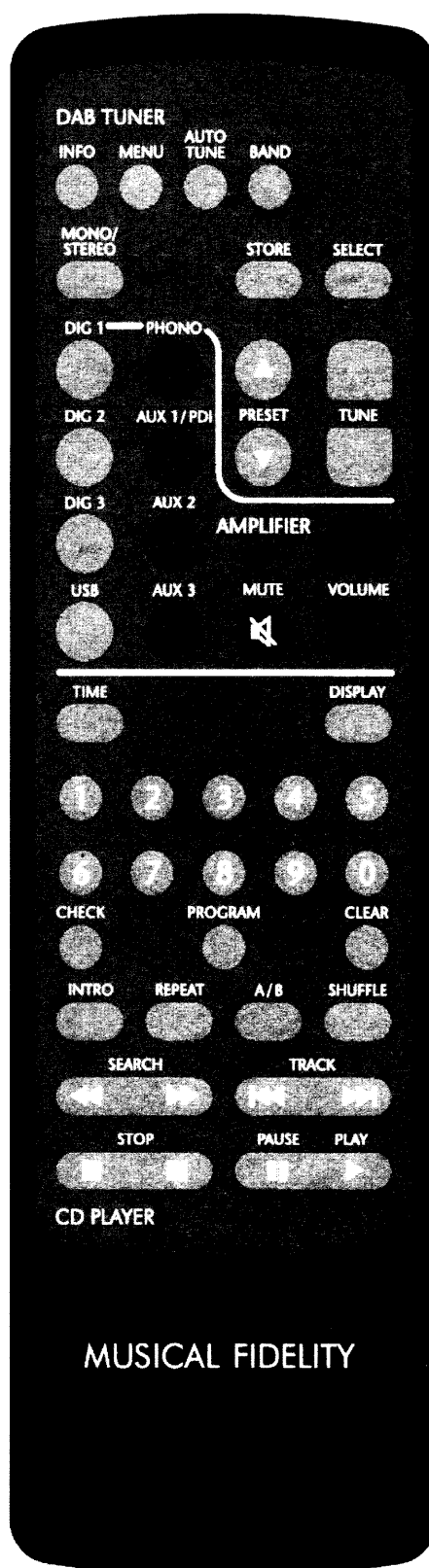
PROGRAM – Programs selection and order of tracks

INTRO – Player plays first 10 seconds of each track

REPEAT – Repeats whole disk or selected tracks

SEARCH – Fast forward/backward through track

STOP – Stop playing/Eject CD



BAND – Selects DAB or FM

STORE – Stores station as preset

SELECT – To choose preset/DAB station

PRESET ↑ ↓ selects preset

TUNE ↑ ↓ steps up/down band

VOLUME UP/DOWN – sets volume level

MUTE – Mutes unit until pressed again

DISPLAY – Dims display

CLEAR – Clears selected pre programmed track

A/B Sets repeat start/end to repeat section of track

SHUFFLE – Plays back tracks in random order

TRACK – Next/previous track

PAUSE/PLAY – Stop/start CD playback

Switch-on

Once power is applied, one input LED indicator should flash. After approx. 30 seconds a small “click” will be heard and one of the output LED indicators (SOLID STATE or TUBE) will light indicating output is enabled, and the unit is ready for use.

When the selected input is unconnected or not receiving digital data, the corresponding LED will flash to indicate absence of signal. When a signal is present, the LED will light continuously.

Digital inputs 1,2,3

You will need a good quality phono to phono cable to connect the DAC to the digital source.

Plug one end into the required input socket in the back of the X-DAC V8

Plug the other end into the digital output RCA socket on your digital source e.g. CD player, minidisk, DAT or Satellite receiver.

Once connected, select the correct input on the front panel or corresponding remote button. The input selected should display a constant light and once the source is playing, the music should be heard through the system.

Computer setup for input 4 (USB input).

You will need a good quality USB A to B cable to connect the unit to the computer.

Plug the B (square) end into the socket in the back of the X-DAC V8

Plug the A (rectangle) end into a free USB socket on your computer.

The computer should detect the new hardware and install a generic driver automatically (No setup or driver disk required).

You will now have a second mixer available which is default whenever the DAC is plugged in. Use this mixer to select the source or adjust levels if required.

CD, MP3, WAV files played on any software should now play through the DAC. This device has been designed to work with Windows 98, ME, 2000 and XP.

Please note:

This device is a high speed serial data processor, and by its nature, requires a very high volume of USB bandwidth. It will benefit greatly from being the only device connected on its USB ‘bus’. Sharing the same bus with other devices may cause unwanted artefacts such as dropouts or temporary loss of signal. This especially includes the use of the DAC on a USB hub/splitter alongside other USB components.

PC users

Check the computer has picked up the device and is currently using it by clicking: (most Windows versions)

- Start
- Settings
- Control panel
- Sounds and Multimedia
- Audio

Check that “USB audio device” appears under PREFERRED AUDIO DEVICE tab

Mac users

Check the computer has picked up the device and is currently using it by clicking: (MAC OS X)

- System preferences
- Hardware
- Sound

Check that “USB audio DAC” is selected under the OUTPUT tab.

If the computer’s warning sounds/chimes are to played through the DAC, make sure it is selected under the SOUND EFFECTS tab too.

Selecting DAC output type:

There are two options of output for the X-DAC V8.

Tube output – Filtered analogue output taken through a top spec tube stage identical to our classic X-10D tube buffer. This gives a lovely tube sound to all the digital sources played though it.

Solid State output – Filtered analogue output for the semiconductor purist, gives the absolute top specification and is best suited to drive longer cable lengths.

The output type can be changed without any rewiring – pressing the front panel button allows instantaneous switch- over at any time. The indicator LED lights to show currently selected option.

Digital Output Coaxial:

An RCA socket for digital output is included to allow loop though digital connection of the selected source. This will enable, for example the digital recording of the selected input onto a CD-R/RW, MD, DAT, or other digital recorder. The data stream sample rate is passed through unaffected.

Basic problem-solving with a DAC is similar to troubleshooting other electrical or electronic equipment. Always check the most obvious possible causes first, such as the following examples:

Problem	Probable Cause	Remedy
No power / lights	Power plug is not inserted correctly	Plug in securely fully into power supply's X-DAC^{V8} rear socket
No audio output, or too low level output	Incorrect or missing connections USB Driver not selected (PC or MAC)	Check connections and make sure they are secure. See P.9 <u>PC users</u> or <u>MAC users</u> section
Dropouts in sound (RCA inputs)	Digital input lead not properly connected Faulty digital input lead	Check input lead is fully secured Change lead. Please use a good quality straight-through signal-and-ground phono to phono lead.
No audio output from USB input	USB Cable not connected USB Driver not selected (PC or MAC)	Check connections and make sure they are secure. See P.9 <u>PC users</u> or <u>Mac users</u> section
Not detected when connected to USB	USB Cable faulty USB not working/enabled on computer Correct USB drivers not installed (can happen particularly with factory-preinstalled Windows operating systems)	Check and replace cable Check USB port functions with another device. Please check with the computer manufacturer. Enquire about USB driver or update.
Dropouts in sound (USB input)	Shared USB port with another device Computer busy with another application Computer low on resources	Avoid sharing the USB port with other devices, if possible. At times an application (program) may intervene, sometimes invisibly e.g. a virus scanner. When this happens, computer resources are temporarily used up, and playback may suffer. This is not a fault. Try running fewer applications if possible.
Hum	Audio connector plug is not fully pushed in	Insert plug securely
Remote control does not work	Power supply switch is set to off	Set switch to on
	Battery(ies) fitted the wrong way round	Insert batteries correctly
	Batteries are flat	Change batteries for a new set
	Remote control is not pointed directly towards the front panel of the DAC	Ensure there is no obstruction between the remote control and DAC front
Remote control range has greatly reduced	Batteries are running out	Change batteries – for a new set

Please note that the driver for the USB input is GENERIC (no disk required, the computer picks the correct driver automatically), and included in the following operating systems:

MicrosoftTM WindowsTM 98SE, ME, 2000 Pro, XP Home/Pro (with Service pack 1 or later)

MacTM OS 9.1 or later (Japanese/English), OS X 10.0 or later (English only), OS X 10.1 or later (Japanese edition SP)
(For Mac OS X 10.0 Japanese edition plug and play does not work appropriately for USB audio devices)

All above information correct at time of going to press. Please check with software company's support for later and/or different versions

DAC:

DAC circuit	24 bit Delta-Sigma (Bit stream) dual differential 8X over sampling
Up sampling	192 kHz
Total correlated jitter	< 135 pS
Linearity	< 0.1dB down to -96dB
Output digital 0dB level	2.18VRMS at 1 kHz nominal
Analogue output impedance	47 Ohms
Frequency response	10Hz to 20 kHz -0.2dB max
Channel separation	> 105dB 20Hz to 20 kHz
Signal / noise ratio	> 117dB "A" weighted
Total harmonic distortion	< 0.003% 10Hz to 20 kHz

Connections:

Digital inputs	1 USB 1.1 [32, 44.1, 48 kHz sample rates] connection for <u>computer</u> only 3 S/PDIF (RCA connector)
Digital outputs	1 S/PDIF (RCA connector)
Line level analogue outputs:	1 pair RCA

Power requirement:

100 / 115 / 230Volts AC 50 / 60Hz (factory pre-set),
16 W no devices connected, idle
26 W all devices connected, idle
30 W maximum

Weight:

4.15 kg,	9.13 lbs	unit only, unboxed
6.4 kg,	14.1 lbs	in shipping carton

Dimensions:

219 mm,	8.6 inches	wide
88 mm,	3.5 inches	high including feet
340 mm,	13.4 inches	deep including terminals

Standard accessories:

Remote control (X-^{V8} series, universal type),
2 batteries size LR03 or AAA, manganese alkaline type
10A IEC Mains lead



Musical Fidelity reserves the right to make improvements which may result in specification or feature changes without notice.

RELEASE	DATE	CHANGES
Issue 1	19th October 2006	1 st issue